

Appl. No. 10/039,838
Amdt. Dated November 21, 2003
Reply to Office Action of July 21, 2003

Attorney Docket No. 82874.0011
Customer No.: 26021

REMARKS/ARGUMENTS

This is in response to the Office Action dated July 21, 2003, which was paper number 6 of the present application. Pursuant to this amendment, claims 1-31 are pending. Claims 1, 5, 6, 13 and 14 are amended. Of the amendments, the amendments to claims 1 and 13 are intended to address the indefiniteness rejection and do not alter the scope of the claims. The amendments to claims 5 and 6 reflect a change in claiming strategy only. The amendment to claim 14 is to make explicit the implicit definition of the taps in that structure. Reexamination and reconsideration are requested.

The Office Action rejected claims 1 and 13 as indefinite. Applicant has amended these claims to better comport with practice.

The Office Action rejects the pending claims over U.S. Patent No. 5,091,986 to Arii, et al. (the Arii patent) either taken alone or for some claims taken in light of other references. Applicant submits that the claims of the present application are directed to a tap coupler incorporating a waveguide substrate. The Arii patent does not discuss or reference tap couplers. As such, the Arii patent does not teach or suggest any aspect of the present invention.

The present invention provides a tap coupler that is more easily manufactured and more readily scaled than conventional implementations of tap couplers, which rely on fiber-to-fiber couplings. As discussed in the background of this application, these fiber-to-fiber tap couplers are rugged and easy to implement for single or few fiber systems. These fiber-to-fiber couplers are not, however, scalable or readily implemented for the hundred or more taps needed for a switch or an OADM.

Applicant includes for the convenience of the Examiner a number of references regarding tap couplers. These advertisements and one reference paper

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were found in an Internet search for “tap couplers” and are submitted to show that the term “tap coupler” is a well established one referring to devices for monitoring the signal or power within an optical channel. As evidenced by the many hundreds of hits for this search, this is a well-established commercial product and has a definite meaning to those of ordinary skill in the art.

The Arii patent does not describe a tap coupler. Rather, the Arii patent describes a Y junction that splits the signal from one waveguide into four waveguides. The general design of such a switch is intended to provide substantially equal couplings into each of the output channels. There is no suggestion in the Arii patent that it would provide or could be used for a tap coupler. Nor is there any suggestion that would lead one to accidentally implement the Arii design as a tap coupler.

A characteristic of tap couplers is that signal is passed through a main channel, substantially without distortion and without substantial loss. The present application describes taps that remove 3.5%, less than 3% (claim 14), 2% and 1% of the light from a main channel. The structure of the Arii patent would not be used as a tap coupler because of the very high losses in that system. There is no discussion of channel cross talk and so it is entirely possible that a main signal in the Arii structure would be distorted. Finally, there is no suggestion in the Arii patent that would cause one to modify that structure to operate as a tap coupler. The other references of record do not suggest modifying the Arii patent to act as a tap coupler.

Consequently, the claims of the present application, which all recite tap couplers in different degrees of detail, distinguish over the art of record and are in condition for allowance.

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In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

By: _____
William H. Wright
Registration No. 36,312
Attorney for Applicant(s)

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500 South Grand Avenue, Suite 1900
Los Angeles, California 90071
Phone: 213-337-6700
Fax: 213-337-6701